

**(19) World Intellectual Property  
Organization  
International Bureau**



**(43) International Publication Date**  
**29 April 2004 (29.04.2004)**

**PCT**

**(10) International Publication Number**  
**WO 2004/036330 A2**

- (51) **International Patent Classification<sup>7</sup>:** **G05F** (81) **Designated States (*national*):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) **International Application Number:** PCT/IB2003/005836

(22) **International Filing Date:** 16 October 2003 (16.10.2003)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**  
60/418,823 16 October 2002 (16.10.2002) US

(71) **Applicant (*for all designated States except US*):** **THOMSON LICENSING S.A.** [/]; 46, Quai A. Le Galo, F-92648 Boulogne Cédex (FR).

(72) **Inventor; and**

(75) **Inventor/Applicant (*for US only*):** **KELLER, Anton, Werner** [CH/CH]; Chalmattstrasse 47, CH-8905 Arni (CH).

(84) **Designated States (*regional*):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**  
— *without international search report and to be republished upon receipt of that report*

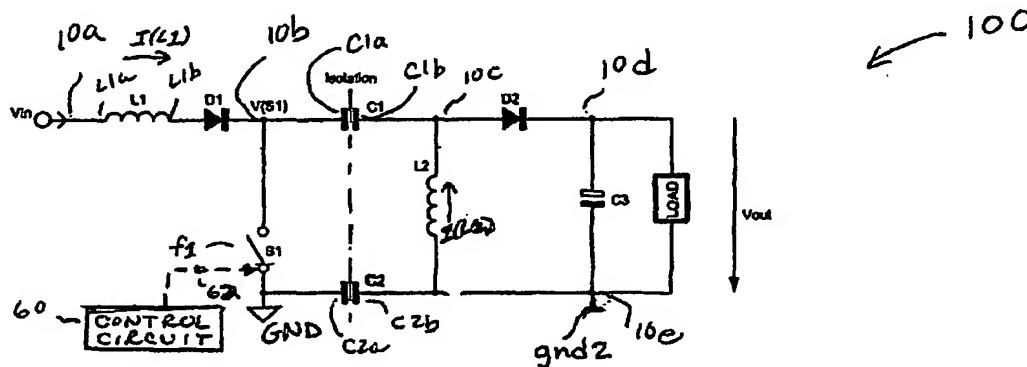
*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *without international search report and to be republished upon receipt of that report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) ~~Title: POWER SUPPLY WITH CAPACITIVE MAINS ISOLATION~~



**(57) Abstract:** A power supply with capacitive mains isolation, comprises a source of an input supply voltage developed between a first terminal and a second terminal. A first supply inductance is coupled to the first terminal, and a second supply inductance is coupled to a load circuit. A switch responsive to a periodic control signal applies the input supply voltage to the first supply inductance to generate a current in the first supply inductance at a first polarity, during a first portion of a period of the control signal when the switch is at a first switch state. A pair of capacitors operate to couple the first supply inductance to the second supply inductance during a second portion of the period of the control signal when the switch is at a second switch state. The pair of capacitors isolate the first and second terminals, respectively, from the second supply inductance at a range of frequencies that is lower than a frequency of the control signal. A first rectifier is coupled to the first supply inductance for preventing the first supply inductance current from changing polarity, during the second portion of the period.